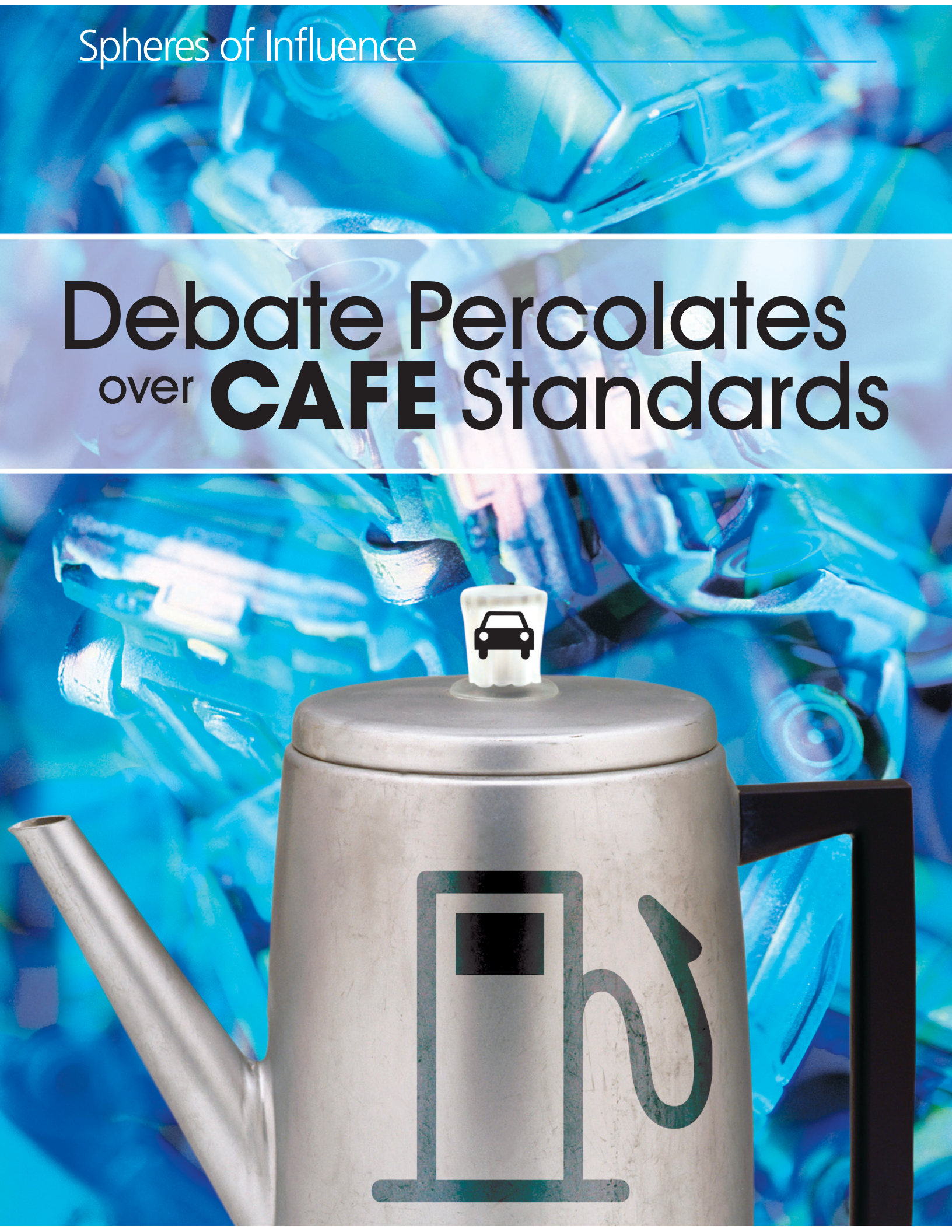
Debate Percolates over CAFE Standards



With gas prices in the United States averaging less than bottled water or milk, the last thing a typical American consumer thinks about when buying a new car is fuel efficiency. Well, almost the last thing. "We have surveys that rank 27 attributes consumers look for when they purchase a new car," says Gregory Dana, vice president of environmental affairs at the Washington, D.C.–based Alliance of Automobile Manufacturers, an industry trade group. "And gas mileage comes in second to last, just behind seating capacity."

According to the American Petroleum Institute, a Washington, D.C.–based trade group representing the oil industry, gas prices in the United States haven't kept pace with inflation for decades. Today, American consumers pay an average of $1.42 per gallon at the pump, according to the Energy Information Administration at the Department of Energy.

This is among the lowest inflation-adjusted price averages ever documented in the United States, says American Petroleum Institute senior policy analyst Rayola Dougher. On average, Americans currently pay more than three times less for gasoline than consumers from most other industrialized countries, she says. The price is about the same throughout the world. But many other countries place a high tax burden on gasoline, which drives consumers toward a greater appreciation for conservation and vehicle gas mileage.

But as long as gas is cheap, Americans have little incentive to buy cars with better mileage ratings. And as long as mileage ranks next to last on lists of buyer concerns, U.S. automakers have little incentive to provide fuel-efficient cars to the public.

John DeCicco, a senior fellow at Environmental Defense, a Washington, D.C.–based environmental group, says motivations for raising vehicle fuel economy now are dominated by societal issues that consumers often find more abstract than the price of a tank of gas, such as security risks from overreliance on imported oil. According to the latest figures released by the Energy Information Administration, the United States currently imports 52% of its oil from overseas. Slightly more than 65% of all oil consumed in the United States, including that contributed by domestic production, is used as fuel for the transportation sector. Many studies have shown that a boost in auto fuel efficiency can save millions of barrels of oil a day, reducing both dependence on foreign imports and U.S. emissions of greenhouse gases that cause global warming.

But these goals have little influence on buyers in the auto market, DeCicco says, even among those claiming to be concerned about oil imports and the environment. "It seems contradictory in the policy sense," he explains, "but not in the psychological sense. It's possible to be concerned about global warming and still want to buy that sport utility vehicle [SUV]."

The Birth of CAFE

In a free-market economy like the United States, public policies fall in line with consumer desires. But without direct pressure from consumers, building a case for higher fuel economy standards that resonates with the auto industry is difficult to do.

Mileage standards in the United States are set by the Corporate Average Fuel Economy (CAFE) program, which was established by Congress in 1975 in response to the 1973 Arab oil embargo. Administered by the U.S. Department of Transportation (DOT), CAFE directed automakers to raise the average mileage rating for cars to 27.5 miles per gallon (mpg) and for light trucks to 20.7 mpg by 1985.

In response to the law, which introduced heavy fines for noncompliance, automakers introduced changes to increase efficiency, including front wheel drive and new models of smaller, lighter cars. Experts credit the changes with a number of beneficial results. A report released earlier this year by the National Research Council (NRC) titled *Effectiveness and Impact of CAFE Standards* claims that by 1984 fuel economy had been raised 62% without any loss in performance, producing a net savings of roughly 2.8 million barrels of oil a day by 2000. Greenhouse gas emissions—which are tied directly to fossil fuel combustion—were also reduced commensurately, an added benefit that policy makers weren't even thinking about when the law was passed.

Throughout the 1970s and 1980s, the buying public welcomed these design changes. Still smarting from the shock of the first Arab oil embargo in 1973, consumers were pushed again toward conservation by the time of a second embargo in 1979–1980, a result of the Iran–Iraq War. "If you look at car advertisements from those days, you see that mileage ratings were important," Dana says.

According to David Greene, program manager of the Transportation Energy and Environmental Policy Office at Oak Ridge National Laboratory in Tennessee, American interest in auto mileage began waning in 1986, the year Saudi Arabia began increasing its domestic oil production. Previously, the Saudis and other members of the Organization of the Petroleum Exporting Countries (OPEC) had deliberately kept oil prices high by controlling production. "But when the Saudis [still the largest oil producer on earth] realized this practice was threatening their market share, they got worried and dramatically boosted output," he says. "That caused oil prices to crash around the world."

The price of oil has not climbed much since, and OPEC's grip on the international market has declined somewhat. Meanwhile, new technologies for finding and extracting oil make the resource more accessible than ever. Worldwide production continues to rise, defying earlier predictions that supplies would dwindle by the turn of the century. Although OPEC producers, particularly in the Persian Gulf, still retain some market power, most economists now agree that sustained price shocks are unlikely in the foreseeable future.

With the pressure of fuel price dissipating, sales of smaller cars have fallen, and consumers have welcomed the emergence of new gas guzzlers such as SUVs and minivans with open arms. These vehicles—addressed by CAFE under the less restrictive "light trucks" category—now dominate the U.S. automobile market. One result of this trend is a drop in the average fuel economy of the entire U.S. fleet. The current average is now 20.4 mpg, the lowest level in 21 years, according to the recent U.S. Environmental Protection Agency (EPA) publication *Light-Duty Automotive Technology and Fuel Economy Trends 1975 Through 2001*.

CAFE in the Current Environment

As consumers stop worrying about oil prices, the challenge of strengthening CAFE for long-range security and environmental reasons becomes even more difficult. Even when oil prices were a concern, the auto industry fought the program, claiming it was overly intrusive and that lighter, more fuel-efficient cars are dangerous to drive. Industry representatives also suggest that efficiency gains are offset by people who drive more when their cars get better mileage (an argument countered by the economic evidence, says DeCicco, that most consumers actually have little flexibility in how much they need to drive).

Tightly knit coalitions of trade associations, lobbyists, and congressional supporters have successfully defeated every attempt to raise CAFE standards since the first target deadline was reached in 1985. Most recently, a campaign orchestrated by the Alliance of Automobile Manufacturers and the Coalition for Vehicle Choice (CVC), a Washington, D.C.–based organization that claims to represent consumer opinions, was instrumental in defeating an effort by

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Senators John Kerry (D–Massachusetts) and John McCain (R–Arizona) to increase CAFE standards for all cars and light trucks to 36 mpg by 2015. Staffers say such an increase would save an estimated 2.5 million barrels of oil a day, roughly the amount now imported from the Middle East.

The CVC called the proposed increase an "extreme" measure that would never be supported by its constituents. "Our members are concerned about safety," says Diane Steed, CVC president and former head of the National Highway Traffic Safety Administration under the Reagan administration. "It's also a choice issue. Many of our members are sportsmen who worry that if vehicles become smaller and lighter, they won't be able to find the models they need." The bill was rejected on 13 March 2002 by the Senate, and the question of raising CAFE standards was transferred to the DOT for two more years of study.

The Problem of Safety

Automakers have employed a variety of methods to achieve better gas mileage. NRC calculations indicate that roughly 25% of the fuel efficiency improvements between 1975 and 1984 are attributable to deweighting—building smaller cars made with greater amounts of aluminum as opposed to cast iron and steel. (The EPA's *Light-Duty Automotive Technology and Fuel Economy Trends 1975 Through 2000* puts this estimate at only 6%.) The rest of the efficiency improvements were the result of various mechanical advancements, says Adrian Lund, an NRC committee member and chief operating officer of the Insurance Institute for Highway Safety, a nonprofit organization specializing in assessing damages from highway crashes, based in Arlington, Virginia. A possible consequence of the deweighting trend, supported by numerous studies, is an increase in the number of driver fatalities. In its recent report, the NRC suggests that vehicle deweighting "probably resulted in 1,300 to 2,600 traffic fatalities in [a single year]."

Safety concerns resonate with the public and are often portrayed as the best reason for rejecting CAFE by the auto industry, which insists that reducing weight is the fastest way to raise efficiency further without compromising performance. But safety concerns are not universally accepted, even among the NRC committee that drafted the recent report. Two committee dissenters, Greene and Maryann Keller, an automotive industry analyst, are quoted in the report as saying, "The level of uncertainty is [high, and] . . . the change in fatality rates due to efforts to improve fuel economy may have actually been zero."

John Wise, retired vice president of Mobil Research and Development Corporation, also on the NRC committee, says the safety issue was heavily debated during committee deliberations. The final conclusion among the majority, he says, is that traffic deaths and deweighting are probably correlated. But this debate obscures an important point, he adds—namely that greater fuel efficiency can be achieved using currently available technologies with no effect on vehicle weight whatsoever. Suggested approaches include the use of low-friction lubricants, variable valve timing, five- and six-speed automatic transmissions, stop–start engines that pause on idle and restart on acceleration, and 42-volt battery systems, among many others. Alternatives such as diesel engines, electric cars, hybrids, and fuel-cell systems were not considered by the NRC, because they are too expensive, and there are cheaper ways to get better fuel efficiency, says Wise. They are still seen as "boutique" items, and overall sales are low.

Other Options

According to the NRC's calculations, a mix of available technologies such as those described above could raise the mileage of a typical midsize car from 27.1 to 32.6 mpg at a cost of $791. Estimated fuel savings over the life span of the car were calculated to be $1,140, indicating the technology would eventually more than pay for itself. Even greater improvements were noted in the light truck category. In this case, employing fuel-saving technology in a large SUV would raise mileage by 42% at a cost of $1,629. The SUV fuel savings were found to be even greater: $2,910 over the vehicle's life span.

The hidden catch in these estimates is the payback time: The buyer is reimbursed for the cost of the fuel-saving technology over the vehicle's life span, estimated by the NRC as 14 years. However, the NRC also points out that new car buyers typically own a car for only 3 years. Therefore, the economic savings in most cases may not be perceived as significant by new car buyers. Society, however, would benefit over the life of the car, especially if the used car market were to recognize the value of higher fuel economy.

It's issues such as these that concern the automobile industry. On the whole, automakers resent the imposition of a federal mandate that would have them pass the cost of saving fuel on to their customers. "A manufacturer would rather spend a few hundred dollars on a video screen for the kids that they can turn around and sell as a thousand-dollar option," DeCicco explains. "You can't do that with a fuel-saving gizmo in the engine. Spending money like this just goes against their instincts."

Dana does not disagree. "Fuel economy is not a high-demand option. But among parents with kids, there's a huge demand for video screens—the video keeps kids quiet. It's just a matter of the industry meeting consumer demand."

The Future of CAFE

As it now stands, the CAFE program faces an uncertain future. Stakeholders acknowledge it's unlikely that current standards will be repealed, but the likelihood that they will be strengthened anytime soon appears to be nil. Throughout its history, various administrations have alternatively embraced and distanced themselves from the program, depending on the state of the economy, the status of the U.S. automotive industry, and the price and availability of oil. The current Bush administration, according to DeCicco, "actually helped to pull the rug out from under the Kerry–McCain effort." This appears to be consistent with the administration's general distaste for federal mandates that affect business. It's interesting to note that neither support nor criticism for the proposal fell along the standard industry/environmental delineations. A range of experts—some of them environmental advocates—believe the standard of 36 mpg targeted by the proposal was economically unfeasible and too high.

Nonetheless, stakeholders predict that gradual improvements to fuel economy are inevitable. "This sense of inevitability comes down to the fundamental nature of the issues in terms of oil and global warming," says DeCicco. "It's creating pressure to which the industry must respond." He adds, "Whether the improvements come through changes to CAFE or some other form of regulation isn't clear. For example, mandates to reduce carbon dioxide emissions could indirectly force higher mileage ratings. I think the odds are that the industry will be compelled to compromise. Right now, they appear to be stonewalling and angling for the best deal."

Recently, the state of California announced a bill requiring cuts in tailpipe emissions of greenhouse gases from cars and light trucks. This may force the auto industry to make cars that consume less gas and thus emit less carbon dioxide, the principal greenhouse gas linked to global warming. At press time, California governor Gray Davis had indicated his intention to sign the bill, despite heavy pressure from the auto industry against the measure.

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